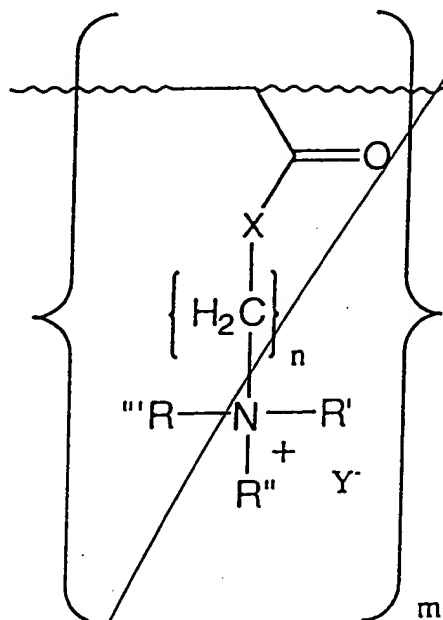What is claimed is:

1. An inherently antimicrobial cationic quaternary amine acrylate polymer of the formula:

wherein n is an integer of 2 to 3; R', R'' and R''' are independently selected from the group consisting of H, C_1 to C_{16} alkyl, aryl, arylamine, alkylamine, alkaryl and aralkyl; X is selected from the group consisting of O and NH; Y⁻ is an acceptable anionic counterion to the N⁺ of the quaternary amine and m is an integer greater than 50,000.

2. A polymer according to Claim 1 wherein R', R'' and R''' are independently selected from the group consisting of H, C_1 to C_3 alkyl, phenyl, tolyl and benzyl.

2. A polymer according to Claim 1 wherein R', R'' are methyl and R''' is benzyl.

3. A polymer according to Claim 2 wherein R', R'' and R''' are methyl.

4. A polymer according to Claim 3 wherein X is O.

5. A polymer according to Claim 3 wherein X is NH.

6. A polymer according to Claim 3 wherein Y^- is a member selected from the group consisting of Cl^-, Br^-, HSO_4^-, and $CH_3SO_4^-$.

7. A polymer according to Claim 6 wherein Y^- is Cl^-.

8. A polymer according to Claim 3 wherein n is 2.

9. A polymer according to Claim 3 wherein n is 3.

11. A wound dressing comprising a hydrogel containing from about 15 to 95 percent by weight of an inherently antimicrobial cationic quaternary amine/acrylate polymer of the formula:

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$$\left[\begin{array}{c} \text{---}C\text{---} \\ \parallel \\ O \\ | \\ X \\ | \\ \{H_2C\}_n \\ | \\ \text{'''}R\text{---}\overset{+}{N}\text{---}R' \quad Y^- \\ | \\ R'' \end{array}\right]_m$$

wherein n is an integer of 2 to 3; R', R'' and R''' are independently selected from the group consisting of H, C_1 to C_{15} alkyl, aryl, arylamine, alkylamine, alkaryl and aralkyl; X is selected from the group consisting of O and NH; Y^- is an acceptable anionic counterion to the N^+ of the quaternary amine and m is an integer greater than 50,000.

12. A wound dressing according to Claim 10 wherein, in the polymer, R', R'' and R''' are independently selected from the group consisting of H, C_1 to C_3 alkyl, phenyl, tolyl and benzyl.

13. A wound dressing according to Claim 11 wherein, in the polymer, R', R'' are methyl and R''' is benzyl.

14. A wound dressing according to Claim 12 wherein, in the polymer, R', R'' and R''' are methyl.

15. A wound dressing according to Claim 14 wherein, in the polymer, X is O.
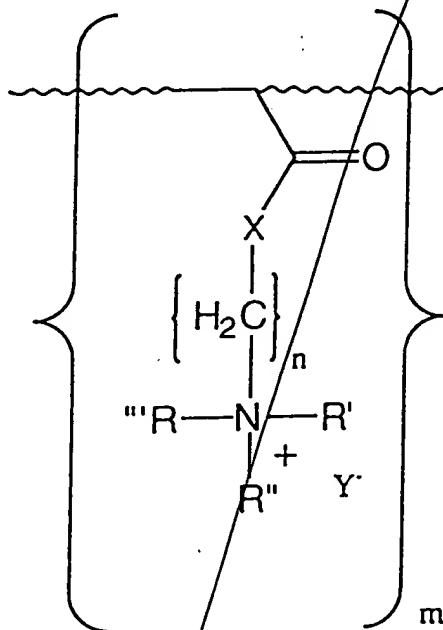
16. A wound dressing according to Claim 14 wherein, in the polymer, X is NH.

17. A wound dressing according to Claim 14 wherein, in the polymer, Y^- is a member selected from the group consisting of Cl^-, Br^-, HSO_4^-, and $CH_3SO_4^-$.

18. A wound dressing according to Claim 17 wherein, in the polymer, Y^- is Cl^-.

19. A wound dressing according to Claim 14 wherein, in the polymer, n is 2.

20. A wound dressing according to Claim 14 wherein, in the polymer, n is 3.

21. A wound dressing according to Claim 11 wherein the hydrogel contains between about 61 and 90% by weight of said cationic quaternary amine polyacrylate polymer.

22.   A wound dressing according to Claim 21 wherein the hydrogel contains between about 65 and 75% by weight of said cationic quaternary amine polyacrylate polymer.

5   23.   A device for the dressing of wounds comprising a substrate having fixedly attached thereto a wound dressing comprising a hydrogel containing from about 15 to 95 percent by weight of an inherently antimicrobial cationic quaternary amine acrylate polymer of the formula:

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$$\left[\begin{array}{c} \overset{\displaystyle \overset{\|}{C}{=}O}{\underset{\displaystyle \underset{\displaystyle \underset{R''}{\overset{+}{N}}}{\left[H_2C \right]_n}}{X}} \\ {}'''R{-}N{-}R' \quad Y^- \end{array} \right]_m$$

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wherein n is an integer of 2 to 3; R', R'' and R''' are independently selected from the group consisting of H, C_1 to C_{16} alkyl, aryl, arylamine, alkylamine, alkaryl and aralkyl; X is selected from the group consisting of O and NH; Y⁻ is an

25   acceptable anionic counterion to the N⁻ of the quaternary amine and m is an integer greater than 50,000.

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24. A device according to Claim 23 wherein the substrate is a fibrous sheet material embedded in said hydrogel and said hydrogel has opposing surfaces, at least one of which is adapted to cover and be in contact with a wound.

25. A device according to Claim 23 wherein said hydrogel has opposing surfaces and said device is an occlusive structure affixed to one surface of said hydrogel with said opposing surface being adapted to cover and be in contact with a wound.

26. A device according to Claim 24 or 25 wherein, in the polymer forming the hydrogel, R', R'' and R''' are independently selected from the group consisting of H, C_1 to C_8 alkyl, phenyl, tolyl and benzyl.

27. A device according to Claim 26 wherein, in the polymer, R', R'' are methyl and R''' is benzyl.

28. A device according to Claim 26 wherein, in the polymer, R', R'' and R''' are methyl.

29. A device according to Claim 28 wherein, in the polymer, X is O.

30. A device according to Claim 28 wherein, in the polymer, X is NH.

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31.   A device according to Claim 28 wherein, in the polymer,
Y⁻ is a member selected from the group consisting of Cl⁻, Br⁻,
HSO_4^-, and $CH_3SO_4^-$.

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32.   A device according to Claim 31 wherein, in the polymer,
Y⁻ is Cl⁻.

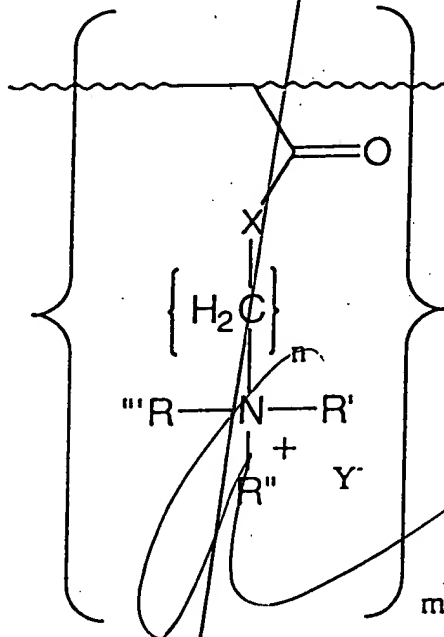32
33.   A device according to Claim 28 wherein, in the polymer,
n is 2.

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34.   A device according to Claim 28 wherein, in the polymer,
n is 3.

35.   A device according to Claim 23 wherein the hydrogel
contains between about 61 and 90% by weight of said cationic
quaternary amine polyacrylate polymer.

36.   A device according to Claim 35 wherein the hydrogel
contains between about 65 and 75% by weight of said cationic
quaternary amine polyacrylate polymer.

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37. A method for treating a wound with an inherently antimicrobial dressing comprising the steps of:

(a) providing a hydrogel containing from about 15 to 95 percent by weight of an inherently antimicrobial cationic quaternary amine acrylate polymer of the formula:

$$\left\{ \begin{array}{c} \text{---} \\ C=O \\ | \\ X \\ | \\ \left\{ H_2C \right\}_n \\ | \\ '''R\text{---}N\text{---}R' \\ | \!\! + \quad Y^- \\ R'' \end{array} \right\}_m$$

wherein n is an integer of 2 to 3; R', R'' and R''' are independently selected from the group consisting of H, C_1 to C_{16} alkyl, aryl, arylamine, alkylamine, alkaryl and aralkyl; X is selected from the group consisting of O and NH; Y^- is an acceptable anionic counterion to the N^+ of the quaternary amine and m is an integer greater than 50,000 in a form suitable to cover the wound;

(b) applying said wound dressing to said wound whereby said dressing enhances the serility of the wound environment, absorbs exudate from said wound and retains said wound in a moist condition.

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38.   A method according to Claim 37 wherein said wound dressing is affixed to device for the dressing of wounds.

39.   A method according to Claim 38 wherein said device comprising a substrate of a fibrous sheet material embedded in said hydrogel and wherein said hydrogel has opposing surfaces at least one of which is adapted to cover and be in contact with a wound.

40.   A method according to Claim 38 wherein said device is an occlusive structure and wherein said hydrogel has opposing surfaces such that one surface of said hydrogel is affixed to one surface of said occlusive structure with said opposing surface being adapted to cover and be in contact with a wound.

41.   A method according to Claim 39 or 40 wherein, in the polymer forming the hydrogel, R', R'' and R''' are independently selected from the group consisting of H, C_1 to C_8 alkyl, phenyl, tolyl and benzyl.

42.   A method according to Claim 41 wherein, in the polymer, R', R'' are methyl and R''' is benzyl.

43.   A method according to Claim 41 wherein, in the polymer, R', R'' and R''' are methyl.

44.   A method according to Claim 43 wherein, in the polymer, X is O.

45.   A method according to Claim 43 wherein, in the polymer, X is NH.

46.   A method according to Claim 43 wherein, in the polymer, Y^- is a member selected from the group consisting of Cl^-, Br^-, HSO_4^-, and $CH_3SO_4^-$.

47.   A method according to Claim 46 wherein, in the polymer, Y^- is Cl^-.

48.   A method according to Claim 43 wherein, in the polymer, n is 2.

49.   A method according to Claim 43 wherein, in the polymer, n is 3.

50.   A method according to Claim 38 wherein the hydrogel contains between about 61 and 90% by weight of said cationic quaternary amine polyacrylate polymer.

51.   A method according to Claim 50 wherein the hydrogel contains between about 65 and 75% by weight of said cationic quaternary amine polyacrylate polymer.

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